UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GAUTAM BHASKAR and GLENN A. JOERGENSEN

Appeal No. 2005-1960
Application No. 09/661,971

ON BRIEF

Before GARRIS, PAK and WALTZ, **Administrative Patent Judges**.

WALTZ, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 1 through 9 and 16 through 18, which are the only claims pending in this application.[1] We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to an apparatus and method for centrifuging and monitoring/controlling

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[1]Claims 10-15 were cancelled in an amendment filed subsequent to the final rejection (see the amendment dated Sep. 12, 2003, entered as per the Advisory Action dated Oct. 8, 2003; see also the Brief, page 2, paragraph (4)).

the temperature of a liquid such as blood or plasma within a rotating centrifuge container without degradation of the components of the liquid (Brief, page 2, paragraph (5)).

Representative independent claims 1 and 16 are reproduced below:

> 1. An apparatus for centrifuging blood or plasma to separate a component therefrom without degradation of protein contained in the blood or protein comprising:
>
> a container for holding the blood or plasma during the centrifuging;
>
> a means for rotating the container;
>
> a heat-emitting device provided opposite the container for radiating the blood or plasma in the container to increase the temperature of the blood or plasma; and
>
> a filter disposed between the heat-emitting device and the container for filtering the radiation emitted from the heat-emitting device to remove substantially all radiation therefrom having a wavelength in the range of from 190 to 400 nm.
>
> 16. A method for centrifuging blood or plasma to separate a component of the blood or plasma without degradation of protein contained in the blood or plasma comprising the steps of:
>
> heating the blood or plasma to about 36 to 37°C with radiation from a heat-emitting device;
>
> filtering the radiation emitted from the heat-emitting device to remove substantially all radiation therefrom having a wavelength in the range of from 190 to 400 nm; and
>
> centrifuging the blood or plasma.

The examiner has relied upon the following references as evidence of obviousness:

Lynam	5,073,012	Dec. 17, 1991
Wollowitz et al. (Wollowitz)	5,593,823	Jan. 14, 1997
Hvid et al. (WO '304) (published World Intell. Prop. Org. Application)	WO 98/30304	Jul. 16, 1998

Claims 1-9 and 16-18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over WO '304 in view of Lynam (Answer, page 3) or Wollowitz (Answer, page 4). Based on the totality of the record, including due consideration of the opposing viewpoints of the Brief and the Answer, we *reverse* the rejections of claims 1-9 and 16-18 essentially for the reasons stated in the Brief and those reasons set forth below.

OPINION

The examiner finds that WO '304 discloses an apparatus that includes every limitation of claim 1 on appeal with the exception of the filter disposed between the heat-emitting device and the container, where the filter is used for filtering the radiation from the heat-emitting device to remove "substantially all" the UV radiation having a wavelength in the range of from 190 to 400 nanometers (nm)(Answer, pages 3 and 5). The examiner further finds that WO '304 teaches that the container is made from polycarbonate (Answer, pages 3 and 4). Therefore the examiner

cites Lynam for the teaching that polycarbonate absorbs UV light below 400 nm wavelength, and the use of UV blockers, filters and screens for protection against UV radiation was well known (Answer, page 4). Similarly, the examiner cites Wollowitz for the teaching of using filters to remove radiation of specific wavelength, where the filter is placed between the heat source and the blood-containing means (Answer, page 5).

From these findings, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention (1) to provide an additional UV filter as taught by Lynam to remove harmful UV light, since the polycarbonate wall of the container already acts as a UV filter (Answer, pages 4 and 6); or (2) to place a filter between the container wall and the heat source as taught by Wollowitz to "make sure that any unwanted radiation wavelengths are filtered" and "to prevent any damage to the blood by the unwanted radiation" (Answer, page 5).

When combining two or more references to establish obviousness, it is incumbent upon the examiner to show some reason, suggestion or motivation to combine the references as proposed. *See In re Dembiczak,* 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The mere fact that the separate

elements of the claimed subject matter were known in the prior art is not sufficient to establish obviousness, but the examiner must establish the desirability of the proposed combination of elements. *See In re Gordon,* 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); *see also Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.,* 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984). As correctly argued by appellants (Brief, page 4), WO '304 suggests no need for a UV filter and neither Lynam nor Wollowitz suggest modifying the apparatus of WO '304 to include a filter. Even assuming *arguendo* that the polycarbonate of the container wall in WO '304 filters some UV radiation, the examiner has failed to establish why it would have been obvious that "an additional UV filter is redundant, and just equivalent" (Answer, page 6), especially when WO '304 fails to disclose or teach any problem with unwanted UV radiation.

The examiner finds that WO '304 "suggests using only visible light, and by doing so implies that UV radiation is avoided (page 4[,] lines 15-24)" (Answer, page 6). However, we find no basis for this finding or implication on this record. WO '304 discloses that the heat source (a halogen bulb) "radiates energy in the visible light range" (page 3, ll. 13-14; page 5, ll. 17-19). WO '304 also teaches that the wall of the centrifuge

container is chosen to be of a visible light transmissive material such as medical grade polycarbonate so that the heat is transferred effectively to the blood with minimal excess heat absorption by the container itself (page 4, ll. 18-21; see also page 9, ll. 1-6). WO '304 considers the visible light from the halogen bulb to pass "almost freely" through the container wall when the wall is polycarbonate (page 10, ll. 2-6). Accordingly, we find no basis in this record for the examiner's finding that WO '304 suggests or implies that UV radiation is unwanted or should be avoided.

We note that method claim 16 on appeal (and dependent claims 17-18) does not positively recite a filter but merely requires filtering the radiation emitted from the heat-emitting device "to remove substantially all radiation" having a UV wavelength of 190 to 400 nm.[2] However, as discussed above, there is no evidence from WO '304 that the medical grade polycarbonate container wall inherently filters any, much less "substantially all," of the UV radiation emitted from the heat source. Lynam discloses that

[2]Upon the return of this application to the jurisdiction of the examiner, the examiner and appellants should review claim 18 on appeal to consider if it is in proper dependent form, i.e., if it further limits the independent claim. See 35 U.S.C. § 112, paragraph 4. The word "about" with regard to the wavelength range in claim 18 renders the wavelength range broader that the range recited in claim 16.

commercial polycarbonate absorbs UV radiation through chromophoric groups either as regular constituents or as *impurities* (col. 8, ll. 56-64, emphasis added). As noted by appellants (Brief, page 4), Lynam further qualifies this teaching by stating that these materials (including polycarbonates) "do not absorb UV radiation uniformly over the entire UV range" (col. 8, ll. 66-68). Therefore, we determine that the examiner has not provided sufficient evidence, on this record, that the medical grade polycarbonate container wall of WO '304 would inherently filter any, much less "substantially all," of the UV radiation emitted by the heat source of this apparatus. We also note, as discussed above, that WO '304 teaches that the visible light from a halogen bulb passes "almost freely" through the polycarbonate container wall (page 10, ll. 2-6).

For the foregoing reasons and those stated in the Brief, we determine that the examiner has not established a *prima facie* case of obviousness in view of the reference evidence. Accordingly, we need not consider appellants' evidence of unexpected results (Brief, pages 4-5; see the specification, page 18, Table 2). *See In re Geiger,* 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

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The decision of the examiner is reversed.

REVERSED

BRADLEY R. GARRIS)
Administrative Patent Judge)
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CHUNG K. PAK) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
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THOMAS A. WALTZ)
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